

American Bee Journal



45th Year

CHICAGO, ILL., JULY 20, 1905

No. 29



LOUIS C. DADANT



C. P. DADANT



HENRY C. DADANT



New Home of Mr. C. P. Dadant, with Mississippi River Shown in the Rear at the Left.
(See page 502)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is \$1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec 5" on your label shows that it is paid to the end of December, 1904.

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ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

- 1st.—To promote the interests of its members.
- 2d.—To protect and defend its members in their lawful rights.
- 3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, \$1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of \$1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.

2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of \$10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with \$1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No. 25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, \$4.00 per gross; less quantities, \$4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

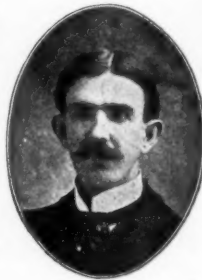
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Please mention Bee Journal when writing

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Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. Catalog Free.

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Untested Queen.....	\$.75	Select Breeding Queen.....	\$5.00
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Tested Queen	1.00	Fair Imported Queen.....	3.00
Select Tested Queen.....	2.00		

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Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each \$3.00
Two-frame Nucleus and Red Clover Queen 3.00

THE FRED W. MUTH CO.,

No. 51 WALNUT ST., CINCINNATI, OHIO.

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—AND A FULL LINE OF—

BEE-SUPPLIES BY RETURN FREIGHT OR EXPRESS. SEND TO



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IT EXCELS.



WE GUARANTEE SATISFACTION.



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Beeswax Wanted at all Times.



DADANT & SONS, Hamilton, Ill.

Millions of Sections Shipping-Cases TONS of COMB FOUNDATION

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day. FINE ITALIAN QUEENS mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, \$1.00; Tested, \$1.00; Select Tested, \$2.00.

C. M. SCOTT & CO. 1004 EAST WASH. STREET INDIANAPOLIS, IND. * * *

N.B.—A Porter Bee-Escape, or its equivalent, FREE with first order, if you say where you saw this ad.

Wanted

Partner in the bee-business. Must understand his business. I have bees, hives, and all other supplies we need. GUILLERMO ARNOLD, box 44, Cardenas, Cuba. Please mention Bee Journal when writing.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, \$1.00; after June 15, 75c; selected tested queens, \$1.25; after June 15, \$1.00. Write postal card for circular. CHAS. KOEPPEN, 17A26t FREDERICKSBURG, VA.



Bee - Supplies !

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our Free Illustrated Catalog, and read description of Alternating Hives, Massie Hives, etc. Write at once for Catalog, either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb. Fulton & Ford, Garden City, Kansas.
Shugart & Ouren, Council Bluffs, Iowa. I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.



FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, \$1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

CHAS. M. DARROW
23Atf R. F. D. No. 1. MILO, MO.

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens	\$.75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

GRIGGS BROS.

521 Monroe Street,
TOLEDO, OHIO.

IN SEASON

Sections

We have a larger stock of sections than we ever had at this season, and are prepared to make prompt shipment of sections, foundation, and most other goods. There has been very little delay in orders all season except in a few cases where something special has held some orders longer than usual. Our agents generally are also in a position to make prompt shipment. If the bees get lots of honey, and you need more goods quickly, remember we are in a position to furnish them by first train.

"I desire to thank you for being so prompt in sending the sections I ordered from you. They came in less time than it takes to tell it."

L. G. REED.

Kent, Ohio, July 10, '05.

Special Price on Tin Cans

We recently secured a special bargain in half-gallon square cans. They are choice bright stock; but as the pattern differed slightly from the regular one they are now making, they closed them out at a special price. We have also an overstock of quart oblong square cans. While this stock lasts we will make the following prices for shipment from Medina only:

1/2-gal. oblong square cans with 1 1/2-inch screw, \$5.00 per 100; \$45.00 per 1000.
 1/2-gal. square cans with 1-inch screws, \$6.00 per 100.
 1/2-gal. " " 1 1/2-in. " 6.50 "
 1/2-gal. " " 1 1/2-in. " 7.00 "
 In 500 lots, 50 cts. per 100 less.

We have also a good stock of one and five gallon cans at regular prices.

Glass Honey-Packages

Anticipating a demand for honey jars and bottles we have put in two car-loads of stock before the summer shut-down of the glass-factories, so that we are prepared to furnish the various jars listed in our catalog. We have also a few odds and ends of stock, such as we formerly listed, which we offer, to close out, as follows. We can not duplicate these when present stock is sold:

1-lb. tin-top tumblers, No. 789, 5 bbls. of 200 each, at \$4.50 per bbl.
 1 1/2-lb. tin-top glass pails, No. 778, 2 bbls. of 100 each, at \$5.00 per bbl.
 Large 1b. tin-top glass pail, No. 777, 1 bbl. of 150, \$5.00.
 Small 1b. tin-top glass pail, No. 776, 1 bbl. of 200, \$5.50.
 1-lb. Oaken Bucket tin top, with wire ball, 1 bbl. of 150 for \$5.00.

These prices are all a dollar less than we used to sell these tumblers and pails at. We have also a little loose stock which we will pack and include at same rate.

Wide-Mouth Mason Fruit-Jars

The car-load price on Mason fruit-jars is over a dollar a gross higher this year than last. We carried over quite a large stock, which we will sell at the same prices as heretofore—namely:

Pint.....doz., 52 cts.; 6 doz., \$3.00; 12 doz., \$5.75
 Quart..... " 55 cts.; " 3.10; " 6.00
 Half-gallon... " 75 cts.; " 4.10; " 8.00
 Triumph wrench, 15 cts. each.

Ball's waxed rings, 5 cts. per dozen. These are far superior to rubber rings for fruit-jars, and cheaper.

In addition to the regular style of Mason jars we have a stock of wide-mouth special Masons, with 3-inch opening. These are especially desirable for canning large fruit whole, or for packing chunk comb honey. These jars are of extra quality, and cost \$1.65 per gross more than the regular pattern. As we do not list them, we offer our present stock at an advance of 10 cts. per dozen, \$1.20 per gross, on any size. They have zinc caps and rubber rings. We have no wax rings of the right size to fit these jars. They are a bargain at this price.

Caucasian Queens

We can spare a limited number of imported Caucasian queens, received direct from the best breeders in Caucasus. Prices as follows:

Extra select Caucasian imported queens.....\$15.00
 Select Caucasian imported queen..... 10.00
 Extra select untested Caucasian-Italian queens,
 from Caucasian mothers mated with Italian
 drones..... 3.00
 Select do..... 2.00

Orders filled in rotation. Delivery begins about July 15.

"How to Keep Bees"

A charmingly written manual describing clearly, and in detail, the outfit, first steps, and methods. The author's well-known literary ability has combined with her enthusiasm for the subject to produce a very unusual volume.

Finally, with all due deference to the authors of excellent books on bee culture which we have already, my opinion is that this new book, "How to Keep Bees," is the best one for a beginner, or one who does not wish or expect to keep more than a dozen colonies, that has yet come before the world.—A. I. Root, in Gleanings, July 1.

Price, \$1.00. Postage 10 cts. extra.

Gleanings' Contests

Second-Prize Photo.—Very liberal awards for best photos of apiary and other bee-keeping objects of interest. Full particulars on application.

Fair Contest.—Gleanings offers prizes of \$10, \$5, \$3 and \$2 for the largest list of subscribers taken by agents during Fairs throughout the country this fall. Here's a chance to make money on regular commissions and prizes. Write for entry blank and particulars.

Complete Catalog by Return Mail.

The A. I. Root Company

MEDINA, OHIO

BRANCHES: Chicago, 144 E. Erie St.

Philadelphia, 10 Vine St.

New York, 44 Vesey St.

ESTABLISHED IN
1861

THE AMERICAN

OLDEST BEE-PAPER
IN AMERICA

BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

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GEORGE W. YORK, Editor

CHICAGO, ILL., JULY 20, 1905

Vol. XLV—No. 29

Editorial Notes and Comments

Locality in Bee-Keeping

A few years ago it became somewhat the fashion to make a joke of the matter of locality, possibly because some attributed to locality things not fairly due to it. But its real importance can not be pooh-poohed out of existence. The fact that in Australia bees are busily working at Christmas, and are in winter quarters July 4, is a mere matter of locality; as also the fact that in the southern part of the United States bees are at work weeks before they are out of winter quarters in the North.

But differences of locality are not alone shown by parallels of latitude. Differences of flora or other differences may be such that a plan of work in a certain place may be excellent, while not at all appropriate in another place only a little distance away. For example, a bee-keeper in a part of Illinois where clover is the chief, if not the sole, source of surplus, might be somewhat puzzled upon reading of P. H. Elwood's plan of management, and would be likely to say:

"I don't quite see how I could carry that out. I'm to dequeen no colony, if I understand correctly, until it is found making preparations for swarming. Then the cells are to be removed just before they would hatch, which would be in 10 days or more. Then a cell is given, and it will be another 10 days before the young queen will lay, or something like 3 weeks after the colony is dequeened. Then we are told, 'This operation should be timed so the young queen will begin to lay at the time of the opening of the main harvest.' That is, the dequeening must take place when the bees are found preparing to swarm, and it must be about 3 weeks before the opening of the main harvest. But bees don't prepare to swarm till the opening of the main harvest; so how can I dequeen when they are found preparing to swarm, and yet do it 3 weeks before the harvest? I don't understand it at all."

He will understand it better if he understands that Mr. Elwood's main harvest is probably basswood, which comes later than

the opening of the white clover harvest; so that it would be an impossibility for the said Illinois bee-keeper to carry out Mr. Elwood's plan, however good it might be in a basswood "locality" in New York State.

The moral of which is, that while one is to study plans and practices of bee-keepers in all localities, yet in applying the knowledge so gained one must keep clearly in view the difference in locality.

Giving Brood to Shaken Swarms

In shaking swarms, some advise giving a frame of brood to hold the swarm, others say the frame of brood will make the swarm desert, and prefer no brood, while still others advise giving a frame of brood and then taking it away as soon as the swarm becomes sufficiently attached to the new home. Just how long it takes for them to become sufficiently attached may be an open question. J. A. Green, after saying that swarms deserted for him when given a frame of brood, was asked whether such desertion occurred on the day of shaking or several days after. He thus replies in *Gleanings in Bee Culture*:

I believe they all came out again the day after they were hived. Two years ago a large percentage, to many of which brood had been given, swarmed out the next day. Some of them, though, were hived in only one section of my hive, with supers above. This season, all swarms, artificial or natural, were hived in two sections of the brood-chamber, generally with only starters in the frames, and without brood, except in the case of two or three afterswarms. Two or three days thereafter the lower section was taken away, leaving them in a brood-chamber six inches in depth, having the capacity of about five Langstroth frames. So far as known not one of them swarmed out. Of course, supers were given them at the time they were hived.

Preventing Swarming by Dequeening

Some years ago a good deal was said about management by making colonies queenless to prevent swarming. P. H. Elwood used the plan successfully, but others reported failure. Possibly they did not understand correctly

Mr. Elwood's plan, having an idea that the thing to do was to keep colonies queenless a longer time than was done by him. It seems, however, that Mr. Elwood's plan might be called requeening rather than dequeening, or, to be more exact, dequeening and requeening.

Here is Mr. Elwood's scheme of management, as given in the *Bee-Keepers' Review* by Irving Kinyon, who, with one other man, helped Mr. Elwood take care of 1200 colonies:

"We discouraged swarming until we were ready to remove the queens. Then, if any were found preparing to swarm, the queen was removed, also one frame of bees and brood. If the queen was an extra good one she was put in an empty hive with the frame of brood. The next 6 or 7 colonies dequeened had their queens killed and one frame of brood from each taken to put with the queen that was saved, which made the increase.

"The eggs that these queens would have laid, if they had been left in the hive, would hatch after the main honey-flow.

"After dequeening began, each yard was gone through and the cells removed just before they would hatch. Since there had been no eggs laid for several days when the cells were destroyed the second time, the bees had given up all idea of swarming, but were very anxious to have a queen. We now select a cell from some colony preparing to swarm, place it in a West cage and give it to the dequeened colony. This operation should be timed so the young queen will begin to lay at the time of the opening of the main harvest, and this colony will have its share of surplus honey, as this plan prevents the bees from dividing their working force at the beginning of the best harvest; and also gives them a vigorous young queen during the honey-flow. In destroying these cells we must be sure that we don't skip even a small one, or it may upset the whole plan."

Freshly-Hived Swarms Deserting

A common question from beginners runs something like this:

"I hived a swarm, and the next day it sailed off to parts unknown. What shall I do to prevent such a thing in the future?"

The most frequent cause of such desertion is heat. A hive unshaded, standing out in the broiling sun with a very small entrance and all the rest closed tight, is a pretty warm place in which to set up housekeeping, and one can hardly blame the newly-settled family for moving out.

The remedy is not difficult to imagine. If possible, let the hive be in a cool, shady place. A temporary shade, and sprinkling with

water will serve a good turn. Give plenty of chance for air. Some practice leaving the hive partly uncovered for two or three days. Some give two stories to the swarm, taking away the lower story after two or three days. Either of these plans provides to some extent against an overheated dwelling. Some practice giving a frame of brood to the swarm, with the idea that the bees will feel they can

not afford to abandon so valuable a piece of property.

In any case, if all laying queens are clipped no prime swarm can abscond unless it joins, or is joined, by some other swarm having a queen with whole wings. The queen with clipped wings may be lost, but it is better to lose the queen alone than to lose both queen and swarm.

the milling of the foundation, which position he has held for 23 years, and he figures that if all the sheets of Dadant foundation he has made were put end to end, they would reach two-thirds of the way around the earth. In a few more years Dadant's foundation will encircle the globe.

The bulk of the foundation made by the Dadants is the "Weed process," which refers to the method of sheeting the wax before milling it. Mr. Leon Saugier, Mr. Dadant's son-in-law, and also brother of Joseph Saugier, is in charge of this part of the work.

They have a certain foreign trade that for some reason will have only the foundation made by the old or dipping process of sheeting the beeswax.

The Dadants have always been famous as bee-keepers also. For 40 years they have run several hundred colonies for extracted honey at the home as well as at out-apiaries. For 12 years—from 1872 to 1884—Mr. C. P. Dadant alone managed 550 colonies in 5 or 6 apiaries.

Miscellaneous News Items

Prof. A. J. Cook and Wife, of Los Angeles Co., Calif., called at this office last week when on their way to spend a year of travel and study in Europe. Their daughter, Miss Bertha Eldredge, will accompany them, and devote herself to music while abroad. They expect to sail Aug. 19, in the meantime visiting relatives in the East. Prof. Cook holds his 63 years wonderfully well, scarcely looking a day older than when we first met him. California climate and other things seem to keep him young in looks and spirit even if they can not stay the passing years.

Prof. Cook will continue to write monthly for the American Bee Journal while he pokes around various places in Europe. So we can all anticipate some interesting articles from his kindly pen during the ensuing year. And, meantime, all will join us in wishing the three globe-trotters a safe journey across the Atlantic, and a pleasant and profitable year on the other side.

A Visit to Dadant & Sons.—For many years we have had a desire to visit the leading bee-supply manufacturers and dealers in the United States, who are also our leading advertisers, and finally the opportunity to begin doing so came last fall. We started out in October, and, as most of our readers know, we have had the pleasure of visiting quite a number of such firms, and also of telling something about them in the American Bee Journal. We believe that these personal and often somewhat minute introductions have been appreciated both by the firms visited and by those who read this paper regularly, who, very likely, are their patrons in a business way.

The last firm that it was our good fortune to see was that of Dadant & Sons. For more than a quarter of a century it was "Chas. Dadant & Son." (Doesn't that look and sound familiar?) But since the elder Dadant passed away, in 1902, his son "C. P." has taken into partnership with himself two of his sons—Louis C. and Henry C., the former being in his 26th year and the latter in his 23d.

The first home of the Dadants, and also their factory, are located right in the woods, about two miles from Hamilton, Ill., for they began by growing grapes and keeping bees, and their present business has developed slowly from these. There are so many trees around their factory and other buildings that it is impossible to take a good view of them from any side, however we succeeded in getting a snap-shot of the main factory, or at least the smoke-stack, as shown herewith.

One of the buildings, constructed of iron,

and then painted, contains only beeswax, and holds something like 20,000 pounds. It is usually kept full, for the Dadants believe in having on hand a large supply of beeswax so as not to run out of the only suitable material for making their excellent comb foundation.

The original firm of Chas. Dadant & Son was founded in 1863, and began the manufacture of comb foundation in 1878. When



THE LATE CHAS. DADANT.



MAIN FACTORY OF DADANT & SONS.

they began it was the intention to make only for their own use, as they were extensive bee-keepers. The first year they made 500 pounds, but they made it so good that others wanted some of it, so the second year they made 2000 pounds, the third year 6000, and so kept on, some years making more and some years less, until during the year from July 1, 1903, to July 1, 1904, they made and sold over 115,000 pounds, which put them away up at the head of the manufacturers of comb foundation. If this season should continue as did that of 1903, they may again reach their banner record.

One secret of the wonderful success of the Dadant foundation is that every inch must be equal in every way to sample. We saw how they make it, and were surprised at the extreme care with which every part of the process is conducted. The least defect is detected by the quick, clear eye of the young lady who lays each sheet on the paper put down by another young lady. Thus it is sorted and papered as it comes from the mill. These young ladies exchange places occasionally to relieve the monotony of the work.

Mr. Joseph Saugier is the man in charge of

One year (1884) they had 45,000 pounds of extracted honey. This was their largest crop, from which they realized \$2800 net of all expenses. They use a very large hive, taking 10 Quinby loose-hanging frames, size $11\frac{1}{2} \times 18\frac{1}{2}$ inches, outside measure. Their hives face south, and on the west inside of the hive is a division-board or dummy, and the back end is made of two boards. On each of some of the best colonies (when we were there, June 21), there were 3 and 4 shallow extracting-supers nearly full of honey. And they had had only one swarm in their 4 apiaries of a total of 250 colonies, so far this season! They have practically no swarms. They run their apiaries for honey, and not for swarms! They believe in large hives—big colonies—and then they always get the honey—if it is to be had from the flowers. Their methods are successful, and they know it. When we enquired why they did not push the sale of their special or Dadant hive, Mr. D. replied, "Oh, bee-keepers think it is too expensive." We found it costs only about \$1.00 more than the ordinary hive. Surely, that should not prevent business bee-keepers from buying them, if by their use and following the Dadant sys

tem of management larger crops of honey can be secured.

Mr. Dadant has promised to write a series of articles on their hive and management for the readers of the American Bee Journal in good time for the season of 1906. To the bee-keeper who desires to make a financial success of producing honey, those articles will be worth hundreds of dollars. There will be no theory about them. The Dadants produce the honey, and can give a good reason for the faith that is in them regarding this matter.

It may not be known to all our readers, but Chas. Dadant & Son were among the very first to make successful the importation of Italian bees on a large scale. They received as high as 400 queens a year, and sold them at \$10 each, or \$20 for a colony of bees with an imported queen. Of course, this was long ago—in the early 70's. Mr. Chas. Dadant made a trip to Italy at a cost of \$400, in order, if possible, to discover a method whereby a large number of queens could be safely shipped to this country. Finally a plan was devised, each queen being put in a very small nucleus box, then 22 of the boxes were packed together and shipped. Often the whole 22 queens, or at least 20 of them, would arrive safely; then, again, all would arrive dead except 2 or 3 in a shipment. The business continued successful and profitable until com-

petition, and unfaithfulness on the part of their Italian shipper, put an end to it.

Mr. Dadant is fortunate in his family. Besides his good wife (who, by the way, is a most faithful and excellent mother, cook and housekeeper), he has three sons and four daughters. Louis and Louisa, the two oldest, are married, the son living on the old homestead which is located only two or three rods from the main factory, and the daughter about a half mile away. Henry and Maurice are the other two boys. Louis and Henry are graduates of the University of Illinois, and Maurice has still three years of work there. The daughters at home are Valentine, Clemence and Harrietta, the last being the "baby" of the family, about 10 years old. Miss Valentine, who has also attended the University, is president of the Hamilton Library, an organization formed three years ago through her efforts, and of which the town is justly proud. It is open to the donation of good books, and has now almost 1000 volumes.

Last year Mr. Dadant built a most beautiful and substantial brick house, from which at the rear the majestic Mississippi River can be seen for nearly 14 miles. It is just opposite Keokuk, Iowa, from which city it looks like a young college in the distance. He and his family moved into it last December.

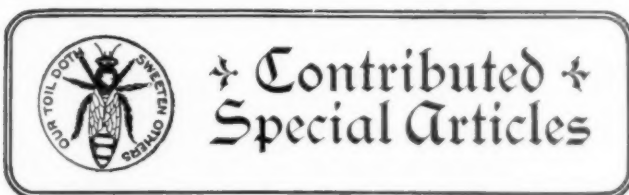
Hamilton, the home of the Dadants, is just

across the river from Keokuk, a fine railroad and driving bridge, three-fourths of a mile long, spanning the Mississippi at that point. Hamilton is a city of 1300 inhabitants, and Keokuk about 15,000.

Mr. Dadant is vice-president and director of the State Bank of Hamilton. Louis C. is also a director. Mr. Dadant's property interests in and about Hamilton are extensive. He is the leading business man of the city, and one whom all respect and delight to honor.

We shall not soon forget our very enjoyable visit with the Dadants. We were royally entertained, Mr. Dadant devoting himself wholly to us from the time of our arrival until we departed. We understood how he could thus absent himself from the business when we saw how his sons, Louis and Henry, made things hum in the office and factory. They are taking right hold of the work, so that Mr. Dadant is required only occasionally during the day or week simply as counsellor, his advice and experience often being of inestimable value.

In next week's issue we will complete the account of this trip, telling of a visit to the old city of Nauvoo, and also of an 11-mile carriage drive to see Mr. E. J. Baxter, a brother-in-law of Mr. Dadant, who is another large and very successful bee-keeper.



Light-Weight vs. Full-Weight Sections

BY L. V. RICKETTS

FOLLOWING my article on light-weight sections being one cause of the small demand for section honey, on page 229, I will say that with the sections now in general use, a 24-section case of No. 1 separated honey will weigh not more than 22 pounds, on an average, which is $14\frac{2}{3}$ ounces per section.

As stated by M. A. Gill (page 213), these sections were at first intended to hold one pound of comb honey, which they did, on an average, as they were used without separators, but since separators have come into general use, and as by their use the holding capacity of sections is reduced, we find that the original 16-ounce section of honey has been reduced to approximately $14\frac{2}{3}$ ounces; yet it is being sold to the consumer as a pound of honey.

This reminds me that for many years, and until about a decade ago, a well-known soda company put up their soda in two different sizes of packages, one size contained 12 ounces, and the other 16 ounces. For many years the lighter weight package was the one generally sold, but finally some of the more enterprising of our grocerymen adopted the heavier package. For a long time both sizes were sold, one grocerymen selling the 16-ounce, while his competitor across the street sold the 12-ounce size, yet the price was exactly the same—10 cents per package. But this state of affairs has changed by the light-weight packages being forced out of the market.

I predict that within 10 years from to-day the average weight for a 24-section case of No. 1 separated honey will be 24 pounds, or 16 ounces per section. This change will at first be made by a few bee-keepers adopting a section large enough to hold 16 ounces of No. 1 separated honey, thereby increasing the sale of their product and finally forcing others to follow in their foot-steps.

Imagine a butter manufacturing company producing bricks of butter weighing only $14\frac{2}{3}$ ounces coming in direct competition with a company producing bricks weighing 16

ounces. Would they not soon be forced to increase the weight of their product, or be driven from the market? A "pound of comb honey" and a "section of honey" are synonymous terms in the minds of the average consumers of section honey, yet they are learning to their dissatisfaction that when buying a section of honey they seldom get a pound.

Leo F. Hanegan (page 268) says in his locality they have trouble in getting $4\frac{1}{4} \times 1\frac{1}{4}$ sections to weigh 22 pounds to the case of 24 sections, on an average, when used with separators when being filled, while across the country 8 miles from his locality the bee-keepers must use sections of $1\frac{1}{4}$ inch width in order to keep them from weighing over 23 pounds per case of 24 sections. He says: "Our market demands an average of 22 pounds per case of 24 sections of No. 1 honey," and asks me to name one size of section for those two localities. My answer is to use a section a little larger than the largest one mentioned by Mr. Hanegan—one that will average 16 ounces to the section of No. 1 separated honey. No one expects to have each and every section weigh exactly 16 ounces.

The idea is to have them average that amount as nearly as possible. I don't believe the old man, "Locality," will assert himself so forcibly as to make it necessary to use two different sizes of sections in order to have them average 16 ounces each.

As to Mr. Hanegan's market demanding 22 pounds per case, I think he meant the wholesale market or commission houses, and not the real market, which is the consumer. It is this market that we must endeavor to please with regard to the weight of sections, and not the large buyer, for if we have plenty of those who buy and consume our product, there will be no difficulty in finding the large buyer. There is where a great mistake is made by bee-keepers trying to please the large buyer instead of the consumer.

Perhaps the principal argument advantage by the advocates of light-weight sections is, that the consumer often prefers them, as they cost (when sold by weight) a cent or two less than one of full weight. With reference to this I will say that a customer who is too poor to buy 16 ounces of honey at one time is too poor to be reckoned as a purchaser and consumer of honey. And a family that can not use 16 ounces of honey before it goes to waste is not to be considered as a consumer of honey. The facts are that those light-weight sections are preferred by some for the purpose of some one to receive pay for something they never possessed. This "some one" may be either the producer, wholesaler, or retail merchant, but it is never to the best interest of the consumer or the bee-keeper at large, as it tends to decrease the demand for honey, and also its consumption.

Whitman Co., Wash.

Knowing the Age of Bees Quite Necessary

BY G. M. DOOLITTLE

MANY seem to suppose that a knowledge regarding the age of bees is of minor importance, and something which only scientists should be interested in. This I think is a very mistaken idea, for in all our manipulation of colonies we shall succeed only as we keep the right proportion of bees of all ages in each or any colony we may make.

Nothing in the bee-business has given me more pleasure in the past than experimenting to ascertain the different ages of bees, and the different offices they perform at certain ages when in a normal condition. When these conditions are not complied with the colony is thrown out of balance, and in that unbalanced condition we find that bees will feebly perform any office of the hive till they can arrange matters normally again. Then it is that we find very young bees going into the fields, when they will bring less than one-half the load that the bees over 16 days old will carry. Old bees will rear queens which are not of half the value of those reared by the younger or nurse-bees, and some workers will even lay eggs, while this office is usually restricted to the queen.

In these experiments I have found that queens reared under the most favorable circumstances attain the average of 4 years, and that, too, under the great stimulus which is brought to bear on them under our modern bee-keeping, wherein a queen is coaxed to lay more eggs each year than did the queens of our fathers. In this way queens are constrained to lay from 3000 to 4000 eggs daily, while in box-hive times, if a queen layed from 2000 to 2500 eggs in a day she was doing remarkably well.

On one occasion I had a queen that lived and did good work till she was nearly 6 years old, laying prolifically till within about 3 months of the time of her superscedure, while several have lived to be nearly or quite 5 years old.

Then I have had queens reared in little nucleus boxes, as was quite the general way 30 years ago, which would not live more than 5 to 9 months, and never keep more than 4 or 5 Langstroth frames full of brood while they lived. Those rearing queens in this way were generally the ones who did not think that there was anything worth looking after regarding the age of the bees, which bees were making the best they possibly could out of the bad plight into which their would-be bee-keeper placed them. In a state of Nature neither all old bees nor all very young bees rear queens, unless some accident happens to force them to do so; and I have found it a good plan not to adopt the "accident" policy if I wish to rear queens which will tend toward an improvement in the bees in the apiary.

The worker-bee rarely attains to a longer life than 45 days during the months of June, July, August and September, while those emerging from their cells in September may live, many of them, till the next May or June, if not injured by our winters, their life being prolonged above the 45 days just in proportion to the work that they do, or the amount of hardship they are required to undergo. Never have I known a worker-bee to survive a single year, and I do not believe it possible for such a thing to come to pass.

I find that, approximately, the bee is in the egg form 3 days; in the larva form $5\frac{1}{2}$ to 6 days, and in the pupa form 12 days. After emerging it takes the bee from 6 to 12 hours to get fully straightened out, soon after which it begins preparing chyle for the larva of the hive, doing this work very largely till it is 6 days old, when, if the weather is pleasant, it comes out of the hive for the first time to take an airing and mark its location, still continuing its work inside of the hive—feeding the brood, building comb, evaporating nectar, etc.—until it is 16 days old, when it goes out to labor as a field-bee, after which it does very little of the inside work of the hive, and dying of old age from 25 to 29 days later. While these bees that are over 16 days old can be forced, through being made queenless, to prepare chyle and rear queens, still queens so reared will work after about the same order as will the workers at field-work, when forced out after honey and pollen when only 5 or 6 days old. In all our artificial increase of colonies it is well so to form them that bees of all ages will remain in each part of any division made.

I find that the life of the drone is nearly the same as that of the worker under favorable conditions, but a very precarious life he lives; for at any time when a scarcity of honey prevails, and the bees are not fed by the apiarist, the drones are unmercifully driven from the hives or are killed by the workers. I have seen it stated that the drones do not live one-half the time the workers do, the proof of which was the writer's experiments made with a nucleus colony. All bee-keepers should know that drones are "commoners;" that is,

they have the privilege of entering, unmolested, any hive that allows its own drones to remain, and that if they are driven from one hive they are allowed to enter another which is retaining its drones. Such is the experience with all close observers along this line.

A nucleus having a queen just fertilized has no more need of drones, and persecutes them till they leave, or, if they persist in staying, kills them. But with an isolated hive, and feeding when there is a scarcity in the fields, it is quite easy to prove that drones will live from 40 to 45 days.

It is a rare thing that any drones live over the winter, but in one or two cases when the hives were unusually full of stores, all during the late summer and fall months, I have had them live so as to be flying in February, but they seem to wear out faster during a state of inactivity than do the workers, for with the advent of pleasant days in the latter part of March and the first of April they are soon all gone, and that when they are not driven from the hives.

Onondaga Co., N. Y.



Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904.

(Continued from page 490)

ABSCONDING OF SHOOK SWARMS.

"How to prevent absconding of shook swarms."

Mr. Smith—I find hiving them on a frame of brood as a rule would prevent that.

Dr. Miller—May I ask Mr. Smith whether he finds in hiving on a frame of brood they start cells on that brood?

Mr. Smith—Yes, I have found that also; not as a rule, though.

Dr. Miller—One of the writers says, Give them a frame of brood and within two or three days take it away again to prevent them starting queen-cells.

Mr. Becker—If I have two swarms that come out at the same time I hive them on a frame of brood, and I never had one yet that left if I did that; and I always do it if I have two swarms come together.

Dr. Miller—Are you talking about natural or shaken swarms?

Mr. Becker—Natural swarms.

Mr. Snell—I never practised that very much, but whenever I have done so I have given the colony a frame of brood, and as yet I have never had them desert.

Mr. Whitney—I have practised shaking swarms and I have never had the shaken swarm leave the hive. Sometimes if I shake them on comb I take the queen with them, and I never had them leave.

Mr. Hutchinson—I never have had any experience myself with shook swarming, but quite a number of those who have written articles on that subject have made one point quite clear, that the bees should be pounded and disturbed and jarred until they fill themselves thoroughly with honey. The natural swarm fills itself when it starts out, and when that point has been attended to there has been very little trouble with absconding. Whereas, if we simply take them off the combs without any of this previous disturbance there will quite frequently be absconding.

Mr. Abbott—I want to ask if the people who practise shaking swarms give them the queen at once? The question is asked if they start cells on the comb? Do they not have a queen given them at once?

Mr. Hutchinson—They have the old queen.

Mr. Abbott—Suppose you make two or three swarms out of a colony?

Dr. Miller—We don't.

Mr. Abbott—I thought if they would give them a queen, and they had brood, I couldn't see why they would start cells.

Dr. Miller—As a matter of fact they do start cells. There are two things you are getting a little mixed, the absconding and the starting of queen-cells. The point is, Do they start cells? They have started cells for me in more than one case,

and perhaps you who say they do not abscond, if you had examined carefully you might find that they had started cells. What they start cells for I don't know. Mr. Stachelhausen says they start cells and he gives them the sheet of brood, holding them there so that they won't abscond. Whether they would go on with that and rear a queen and swarm again I don't know, because I always stopped them and took them away. But it is, I think, a pretty common thing that they start cells when you give a frame of brood to a shaken swarm.

Mr. Whitney—Perhaps I don't understand. When I said they didn't abscond when I put them on frames of comb it is simply old combs with the queen. I don't understand that they would commence queen-cells under such circumstances as that. But when I give them uncapped brood and eggs I have never had them trouble me by attempting to abscond, but they do rear queen-cells, and they will rear a queen unless you introduce one, of course. I would think if they didn't commence making queen-cells you would have a very weak colony of bees very soon. When parts of mine leave the hive sometimes I have shut them in for 36 hours, and especially if I move that hive away from the old stand; and I have never had any trouble, and I have shaken swarms a great many times.

Mr. Abbott—I made shook swarms long before I ever heard tell of shook swarms, at least I suppose I was doing the same thing. I did this: I took a colony of bees and divided it up into two or three colonies sometimes and gave them all a laying queen. I had the queens, maybe a dozen, before I commenced my work, and with each colony went a queen, turned loose at once, and they had one frame of brood and the rest foundation, and under such circumstances I have never had any cells started or had any trouble. My idea was to bring out the point that the way to make shook swarms

is to keep a number of laying queens on the colonies you want to divide, and then turn the laying queens loose at once, and I don't think they will build any cells if you do that.

Mr. Hutchinson—If I understand the matter, they do not shake the bees from the colony until they have made preparations for swarming; and the bees are shaken off on the old stand and the brood given the bees on the new stand; and the old queen and all of the bees, or nearly all, go on the old stand, and the flying bees that come back join that, and that has a queen; and what we have been talking about is the giving of a new swarm a comb of brood to prevent them absconding, and sometimes they go to work and build cells on that. That is all the division they usually make; they do not divide them up into several parts; they just have the two; and the old combs of brood are usually given a queen-cell nearly ready to hatch, or else given a laying queen, preferably a laying queen. If it is given, then there is no use going to work and hunting up the queen-cells and destroying them, because that colony and laying queen will destroy them themselves.

Mr. Smith—I believe it is their instinct for their own preservation. You disturb a colony of bees, or alarm them, and they will immediately start queen-cells, but they will cut them out again after they find their old queen is secure, in a day or two. I think that is the reason; it is the fear of their queen being injured or taken from them that they start queen-cells.

Mr. Snell—I would like to ask any one who has given a shook swarm a queen, and then that colony started cells, if he has ever known them to be matured and a swarm made from such colonies? I would doubt their doing it very much.

(Continued next week.)

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. MILLER, Marengo, Ill.
Dr. Miller does not answer Questions by mail.

Putting Weak Colonies Over Strong Ones

I see that you wish everybody to report results in putting a weak colony over a strong one. We tried 12 that way and we had no queens killed.

We were very well satisfied with the results. We have 8 pairs still together. May not the use of hybrid bees explain failure in other cases? MISSOURI.

ANSWER.—I don't know. It doesn't seem that there should be any difference between hybrids and others, but sometimes there is a difference where it is not suspected.

Putting On Supers—Dividing for Increase

1. What is gained by putting the second super below the first one?
2. Why put on a second super until the first one is full?
3. Why not take the super off when full, before putting on another one?
4. How long is it after the egg is deposited in the cell until the cell is capped?
5. At what time and in what way are the young bees fed?
6. How long is it after the old queen leaves the hive with the first swarm until the new queen meets the drone and is ready to begin laying?
7. I live in southwestern Missouri. Would it be advisable to divide the bees in a hive now? My bees have failed to swarm any this season, and I should like to increase my stock. Can one not having experience divide them successfully?

How late would it be advisable to introduce new Italian queens into old colonies, in this

latitude? I have only one Italian colony in 11, which I got by introducing an Italian queen in September, 1904. I had no experience at that time, but met with the best of success, and now the colony is very strong and working nicely. I have had no swarm from it. Would it not be better to introduce new queens about Aug. 1, in this locality?

8. Would it be advisable to try to divide the colonies after the supers have been put on. MISSOURI.

ANSWERS.—1. The bees will begin to work sooner in the new super if it is put under than they will if it is put on top.

2. After the first one is full, so that there is no room for the bees to store, it will still take them some time to finish up the sealing so the sections are fit to take off, and the second super gives them room to work in during that time.

3. For the reason already given. Try two colonies side by side the two ways and see which you like best. At the present writing (July 10) very few of my colonies have only two supers on. Some of them have four, and a few five.

4. Eight or nine days.

5. They are fed by the nurse-bees for 5 days or more from the time the larva hatches out of the egg until it is sealed over.

6. The young queen will emerge from her cell about 7 or 8 days after the prime swarm issues. When 5 days old or older, she will mate. In 16 days or more from the issuing of the prime swarm she will begin laying.

7. Yes, by reading up well in your book of instruction so as to have general principles well in mind, you ought to be able to make increase successfully on first trial, and there is plenty of time for it yet.

8. You can introduce any time from now until bees stop work.

9. Yes, if increase is important, although

you must remember that you can't have your cake and eat it too, and if you turn the force of the bees toward increase it will interfere with the honey crop. There are localities, however, where the harvest is heavy late in the season, and in such a locality it is possible to get more honey by dividing early. In most places a colony that works straight through without having its forces divided will store more than the colony and its increase together would store.

Catching the Drones—How Many Colonies to Keep

1. When should the drones be caught?
2. Why are there so many when it is only necessary for them to meet the queen once?
3. I live in the south central part of the State. Is it a good bee-district?
4. How many colonies would it be advisable to keep? INDIANA.

ANSWERS.—1. Any time. Prevention, however, is better than cure. Allow very little drone-comb in your hives and you'll have few drones.

2. For greater safety to the queen. If there was only one drone for each queen, the queen might make many trips before mating.

3. Yes, but some parts are better than others.

4. Probably not more than 100, and perhaps less than that if other bees are within 2 or 3 miles.

Transferring Bees from Box-Hives

I have a colony of bees in a box-hive. There are no frames in it. The comb is built every way in the brood-chamber. I would like to get them into a modern hive. I have a new 10-frame dovetailed hive. Can I put the new hive on the old stand and set the old hive on top of it, and have the bees go down and build comb in the new hive, getting the bees out of it in that way? How can I get them into the new hive? When would be the best time of year to do it? They swarmed June 11. MICHIGAN.

ANSWER.—It is not certain just how you will come out if you set the old hive over a new one. If the old hive is quite large, and

the colony weak, they may not build down into the new hive. If strong, and the season good, they may build down satisfactorily. If they do not build down, it is perhaps as well to leave them right where they are, so as to build up strong for winter; then next year you can transfer 3 weeks after swarming, when there will be no worker-brood in the hive, driving out the bees, and melting up the comb, unless you want to save some of the best of it. The probability is that the bees will winter better and be stronger next spring if you leave them in the old hive, as the colony was probably not so very strong after swarming.

Bees That Never Swarmed

I bought 7 colonies 2 years ago, and they have never swarmed. Isn't that a very uncommon thing?

ILLINOIS.

ANSWER.—Yes, it is a most decidedly unusual thing, and if you have bees that will do good work and not one of the whole 7 colonies offer to swarm in 2 years, you have something to be greatly thankful for.

Fastening Foundation Starters in Sections

1. How do you fasten starters in the sections where you put them in say $3\frac{1}{4}$ inches long? I can not keep them straight, as they are not fastened at the bottom.

2. I find that when I leave as much as $\frac{3}{4}$ of an inch space between the bottom of the super and the frames, the bees invariably fill in the space with comb and honey. Is it not best to leave a space about $\frac{3}{4}$ -inch?

MISSOURI.

ANSWERS.—1. At our house they are put in with a Daisy fastener. The best way to have the comb fastened well at the bottom is to use a bottom starter $\frac{1}{4}$ inch.

2. Of course they will build in a space of $\frac{3}{4}$ of an inch. And they'll build no little in a $\frac{3}{4}$ -inch space. Don't have it more than $\frac{1}{4}$ inch.

Preventing Robbing—Using Queen-Cells—Italianizing—Starting Nuclei Late

1. How can I prevent robbing among bees?

2. I have a queenless colony with 6 queen-cells started. Can I use some of them to any advantage?

3. I have several colonies of goldens and two of blacks. Would I best get rid of the black queens?

4. Is it too late in the season to start a new colony with two frames and a queen?

KENTUCKY.

ANSWERS.—1. Robbing is likely to be started if honey is left exposed where bees can get at it, especially at a time when bees are not gathering. Avoid anything of that kind. When there is nothing to be had in the fields, sometimes robber-bees are so troublesome that even opening a hive and taking out

the combs will start robbing. At such times avoid opening hives, or if you already have a hive open and see by their darting into the top of the hive that robbers are getting the start, close up at once, and if for any reason you must handle the bees, do it under a tent, or wait till nearly dark before opening the hives. Weak, queenless colonies fall an easy prey to robbers. Either break them up or supply them with a queen. Keep all colonies strong and provided with good queens, and don't do anything to tempt the robbers, and you'll not be likely to have much trouble.

2. Yes, if you wish to have more queens, each cell may be given to a nucleus.

3. Yes, if you find them inferior to the others, as they probably are.

4. No, you can start in August, by giving enough help.

Location for Keeping Bees

I am thinking of going to Arkansas, or western Kansas, to keep bees. The forage is sweet clover in both places. In which place will bees do the best?

KANSAS.

ANSWER.—That isn't a question that can be answered in a single word. You will find good and poor locations in both States. The best way will be to make a personal visit and find out whether a certain location will suit you. The number of bees already on the ground must be taken into consideration. The best location in either of the States is not the best place for you if the ground is already occupied by others. If you find a place where there are no apiaries, only some one with a few colonies who has no intention of increasing the business, and whose bees are doing remarkably well, that's likely to be a good place for you. But remember that you can't count on as good results with 50 or 100 colonies as you can with only 2 or 3.

Queen Laying Several Eggs in a Cell

I have a queen that I reared in a nucleus. She is of good size and pure Italian; very gentle. I have seen her lay while holding up the comb, but I have counted as many as 6 eggs in one cell. What do you think is the matter with her? She is in a hive, but the bees cover only 4 frames in it. Do you think there ought to be more bees in it so the queen could have more room?

INDIANA.

ANSWER.—It is nothing unusual for a good queen to lay more than one egg in a cell when she has so small a force of bees that she hasn't room to spread herself; although it is unusual for her to lay so many as 6 in a cell. If she keeps supplied with eggs all the cells that the bees cover, you needn't worry about her throwing in a few for good measure. If, however, she lays duplicates in a few of the cells and leaves other available cells empty, there is something wrong, and if she persists in that line of conduct she should lose her head. But it happens sometimes that a queen will lay in an abnormal manner for a week or so, and then straighten up and lay as a good queen should.

handy for one to do any more. Just let them look around here. Here's original scientific work that will last as long as the coal-beds do. Let such a youth select one or more insects for close acquaintance, and put himself in communication with some institution or university that works at this branch of Nature work.

"How to Make a Cage for Your Canary Out of Old Umbrella Ribs," is it now? Fine specimen of Prof. Bigelow's scorn for the clap-trap arrangements of previous workers when they studied bees a little. It seems that they have been very inconsistent, in that they use costly and nice apparatus to study creatures of much less importance than bees. Still we must not forget that sometimes very costly and fine-looking apparatus works—not half so well as the clap-traps. I object decidedly to calling the one-frame observation hive a failure. Allen Latham has recently been making it a success to a remarkable degree. There is room for both the Bigelow Educational Hive and the one-frame kind. Let there be no fighting and calling names between them. The former is new; and a season's work with it is likely to result in considerable modifications—strange if it didn't. I notice Prof. Bigelow speaks of letting the bees run in, and letting the bees run out, instead of speaking of putting the bees in and taking them out. I infer, therefore, that he has not continued very long working with bees—in all weathers, and in all their moods and tempers—and hardly knows yet how contrary they can be about doing just what one wants them to do on mere asking. Students well inured to bees are likely to prefer in large measure free manipulations in the open to bee-tight ones indoors.

The feeder arranged with a powerful magnifying lens attached, to study the bee's members "on the critter," and especially the ligula and its way of taking in honey, I would commend in the highest terms. I sadly fear that most of our folks have never taken in the idea yet that bees *can not* suck honey through a straw as breathing creatures can. Just how far suction is got up some other way than by breathing, and just how far the fluid is paddled up, or by capillary attraction wheedled up, are fascinating propositions to study.

What we are after most greedily is the seeming impossibility of a hive in which any part can be seen at will *without disturbing a bee*. We especially need to see them "at home" with home feelings and quietness. We want also a prosperous colony and not an abnormal and woe-begone one. We can dispense with great populousness, but we don't want the colony too small. The Bigelow Educational Hive provides for a colony of maximum strength (which is very well so far); but some of the bigger desirabilities, one can hardly see how they are provided for.

THE PUCKERING ALUM-WEED HONEY!

Alum-weed honey, eh? warranted to pucker a child's mouth so it can't bawl for seven hours! The demand for it should rise with the progress of the anti-race-suicide reform; but Brudder Smith will have to shell out advertising rates when he tells us his price for it. Page 376.

SUMAC HONEY AND BLOOM.

The honey that I call sumac (still a possibility of mistake) is amber or yellowish in color, and in quality not bad—but still not as good as I wish it was. When raw nectar it has a tang, a sort of sour, reminding one of the taste of sumac fruit (the red bobs), if you ever tried to eat them. My locality is strong on sumacs, especially *Rhus copallina*, which blooms far along in summer, much later than the other species. Page 361.

COMB HONEY IN CONFECTIONERY.

All right to experiment with honey, using wax and all, for confectionery, but look a little out. So little way as my experience goes, it is that honey always gets more or less of bad taste from contact with melted beeswax. Rather queer. Don't seem as though it ought to be so. Wonder if it is the detergent quality that makes the mischief—washes the wax and takes the impurities to itself. If that's really the case a little invention may come in here, too. Page 360.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

BEES AS A NATURE STUDY.

Prof. Bigelow, on pages 373-5, gives us a most delightful article. Hard work to handle it adequately in the limits of this department. It is well adapted to stir up some of that strangely large proportion of intelligent people who keep themselves oblivious to Nature's multiple and perennial miracles as shown in the transformation of insects—things are created before our eyes, not out of nothing, but out of incongruous previous things. And

what an enormous mass of world-work—world's scientific work—is yet to be done relating to insects! Of insect species 30,000 have been described (how little that is!), but of undescribed species there yet remain nine or ten times as many—say over 250,000! Most of the lesser host of 30,000 still need to have their life history and characteristics studied up. I suppose many ambitious young men and young women have mourned that there was nothing of world-embracing significance

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Laying of Laying Workers

If you ever have much to do with laying workers, you'll find that one of their peculiarities is a preference for drone-cells in which to lay their eggs, and rather than to take up with worker-cells they will lay two or more eggs in each drone-cell, if drone-comb is present. It has been said that they prefer the larger cells because they can more comfortably reach to the bottoms of the larger cells to deposit their eggs there. If that be the case, a queen-cell ought to be still more to their liking on account of its great diameter. And in actual practice that seems to be the case, for it is not uncommon to find in a colony of laying workers a queen-cell with a plurality of eggs, sometimes as many as a dozen eggs in one cell.

So when a queen-cell has been found containing more than one egg, it has been counted a sure sign of laying workers. But it seems the rule can not be relied on as one without exceptions. About 10 days ago, in a prosperous colony whose queen was less than a year old and doing good work, I found a queen-cell containing three eggs! I called Dr. Miller's attention to it, and he said he had never seen or heard of such a thing before. Yet since then two other cases have occurred, one with three eggs in a queen-cell and one with two. Is there a conspiracy among the bees to unsettle our dependence upon a rule that has been heretofore considered without exception?

Roger's Song

Who loves the rose without a thorn? Not I.
No guardian darts around her close,
For every passing hand she blows,
With every touch her bloom is straw—
I love no rose without a thorn. Not I.

Who loves the bee without a sting? Not I.
'Tis but a stupid, idle drone
May live a feeble life alone,
And be so dull and poor a thing—
I love no bee without a sting. Not I.

Who loves a maid without a will? Not I.
A thornless rose, a stingless bee,
A will-less maid, are not for me;
Give me the sweet wild briar still—
I love no maid without a will. Not I.

—DOROTHEA GORE BROWNE, in Sweetbriar.

Does It Pay to Double Up Colonies?

Mr. Allen Latham asks the above question, on page 438, and gives the following rather two-faced answer:

"Evidently it does or so many successful apiarists would not recommend it. Yet my own experience in doubling up has never been satisfactory in the results obtained."

Then he goes on to say that in a few days the doubled colony has apparently no more bees than the single one previously had on the same stand.

In the spring there are times when colonies dwindle away, and when they are taken with the "dwindles" it doesn't pay to double up, a half-dozen of them united will shortly appear no stronger than each single one did. Doubling such colonies has not been advised of late years. Indeed, it is not generally advised to unite two weak colonies in the spring if each has a good queen. In the fall it is advised, as both are likely to die if not united.

Doubling colonies in the spring is advised when a colony is queenless. Then is the time when the beginner finds it hard to believe that by reducing the number of colonies she will have more bees. She thinks that by

giving to the queenless weakling a frame of brood from time to time she can coax it along and have it rear a queen. But if she has only two colonies, and one of them queenless in early spring, experience will probably teach her that reducing the two colonies to one will result in more bees, and more colonies as well, by fall.

Honey for the Toilet

Apart from the medicinal uses to which honey is and may be applied, are those connected with the toilet. A small jar containing honey should be kept on every washstand and in every nursery. Honey proves a panacea for most of the ills that flesh, or rather skin, is heir to, in the shape of cracked lips, roughness of the skin, blotchy patches around the mouth, which are most disfiguring to even the most beautiful, chilblained or chapped hands, sore and cracked heels, wind-caught ears, etc., which can all be prevented by this simple remedy.

The application is so easy, and no one can object to it, as they do to so many other remedies. After washing any part of the body suffering from any of the above unpleasantness, apply to the part affected, while still wet, a very little honey, by dipping the finger into the jar and smearing over. To those who suffer habitually in winter from any of these distressing complaints, the continued use of honey will prevent them from appearing. Begin to use as soon as the weather gets cold, or as soon as the wind begins to nip.—Irish Bee Journal.

Reports and Experiences

Light Honey-Flow So Far

This is the time when we should have our heaviest honey-flow, but up to 2 days ago the bees had barely made a living; now there is a light flow on and we hope the same will keep on getting better. Bees in general are in fine condition and we may have a fair crop yet.

F. RAUCHFUSS.

Arapahoe Co., Colo., June 26.

Good Clover Crop—Unsettled Weather

There is an abundance of white clover, but the weather is very broken—so much so that the bees are handicapped, and can not put in over half time. I lost 15 colonies through spring dwindling, and had to feed a lot of them. What are left are in good condition.

W. IRVINE, SR.

Webster Co., Iowa, June 19.

Season in North Central California

"One swallow does not make a summer," neither does a big rainfall make a respectable crop of honey. At least such is the observation I am led to record in regard to the output of the bee-hives in that portion of California about the Bay of San Francisco. For nigh some 40 years bees have been kept on our place in the foothill north of Oakland, and about 12 miles directly east of the Golden Gate. As near as I can recollect our bees heretofore stored a fair, or, in most cases, a good crop of honey, every year we had over an average rainfall. This year, however, there is an entire failure of a crop; in fact, I

have had some colonies make a fair storage of nectar in our driest years.

The past winter and spring was above the average as to rainfall, in places it was much above the average, and extended over a long period. The nights, too, were cooler than usual. This state of affairs no doubt prevented the flowers from secreting nectar.

Such a long, wet season had a beneficial effect in producing a fine stand of vegetation; the flowers were plentiful and marvelously gorgeous. But, as stated, the nectar was lacking, or could it be that the bees were lazy and thought that there would be an abundance of flowers the year through, and that it would be unnecessary to fill their larders with winter stores? I hardly believe so.

THE DRONES TO GO EARLY.

The indications were good for early swarming. Some colonies cast swarms in April and some in May, but by the end of May and early in June I noticed that many colonies began to drive out the drones; in fact, there was a great slaughter of them. I never saw the banishment of the male population of the hives begin before until toward the close of July, or in August. This convinces me, too, that the bees considered the honey season closed early. No honey, no drones; no drones, some winter stores, may be. Perhaps this is bee-logic.

W. A. PRYAL.

Alameda Co., Calif., June 19.

Gathering from Sweet Clover

I have 15 colonies of bees and they are doing very well. I have a small field of sweet clover in bloom and my bees gather lots of honey from it.

The American Bee Journal is worth its weight in gold to me.

JAMES ULRICH.

Lebanon Co., Pa., June 26.

Terrible Cyclone in Kansas

On May 8 a most terrible cyclone made its way through our little town, doing an immense damage to life and property. Twenty were killed, 45 families were made homeless, \$10,000 worth of damage was done to property, and a score or more who were seriously hurt were taken to the school-house. Aid came from all directions. Kansas City wired us \$1000 to-day.

My loss is \$1000, but my family escaped from injury, so we are thankful. I lost 22 colonies of bees out of 75. The hives and bees are entirely gone—no trace of them anywhere.

CHAS. NORLIN.

McPherson Co., Kans., May 15.

Waterleaf—A Honey-Plant

I enclose a specimen of honey-plant quite common here, but have never seen it described or named in any of the bee-papers. It grows on high land, in the edge of forests, and in the old slashings, and yields a light-colored honey of good quality. Coming as it does between dandelion and white clover it is a valuable addition to our honey-plants. Our bees often store quite a surplus from it and it is rarely a failure.

F. M. COTTRELL.

Shawano Co., Wis., June 10.

[The flower is the common waterleaf (Hydrophyllum Virginicum). The name is not a characteristic of the flower, as it does not grow in water. Damp woods and shady places suit it best, but it grows well in more open ground. The pale blue blossoms open slowly and bloom from June to August, thus giving the bees a lengthy harvest time.—C. L. WALTON].

ITALIAN QUEENS

	1	3	6
Untested	.65c	\$1.75	\$3.00
Tested	.90c	2.40	4.50

Safe arrival guaranteed.

JOHN LEININGER, Ft. Jennings, Ohio

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Quality is the first consideration about Sections. "Lewis' Sections" means highest quality. Do not be misled by low prices. A clean-cut, brilliant, white section enhances the price of your honey.

Shipping-Cases

Order your supply now. Pack your honey in cases before storing away; this keeps them in a bright, clean condition. We invite your inquiries. We can ship promptly.

Louis Hanssen's Sons

27A4t Davenport, Iowa.

Please mention Bee Journal when writing.

Three Requisites

SECTIONS FOUNDATION SMOKERS

Every comb-honey producer knows how extremely necessary are these three articles to insure success in his apiary.

We Have Them All in Guaranteed Quality

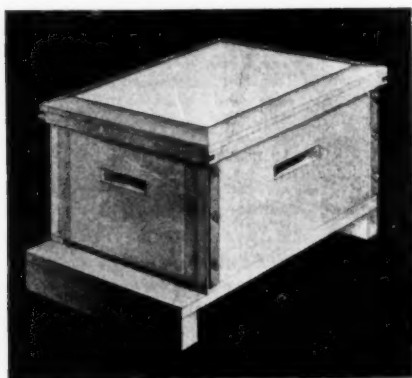
SECTIONS—We have a quantity of No. 2 which are better than some we have seen classed No. 1. And to move quickly—\$1.75 for 500; \$3 per 1000.

FOUNDATION—Thin Surplus, every inch of it guaranteed to be right or money refunded: 1 lb., 65c; 5 lbs., 62c per lb.; 10 lbs., 60c per lb.; 25 lbs., 58c per lb.

SMOKERS—The best hot-blast, direct-draft Smoker made: 4-in., \$1.25; 3½-in., 85c; 3-in., 75c; 2½-in., 70c; 2-in., 50c.

Why not put those good bees in good hives? They will appreciate it. You'll feel better about it, too.

We sell the best made—**THE ELGIN**—patent corners. No nails—no dovetails.



Money and brains cannot make better. Maybe a circular will make you believe it. Write for one to-day.

The National Supply Co.

E. End Kimball St. Bridge, ELGIN, ILL.
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An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with \$1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be earned in a legitimate way. They are worth working for.

If you can not get a new subscriber, and want one or more of these Queens, we will send the American Bee Journal a year and a Queen—both for only \$1.50.

Address all orders to

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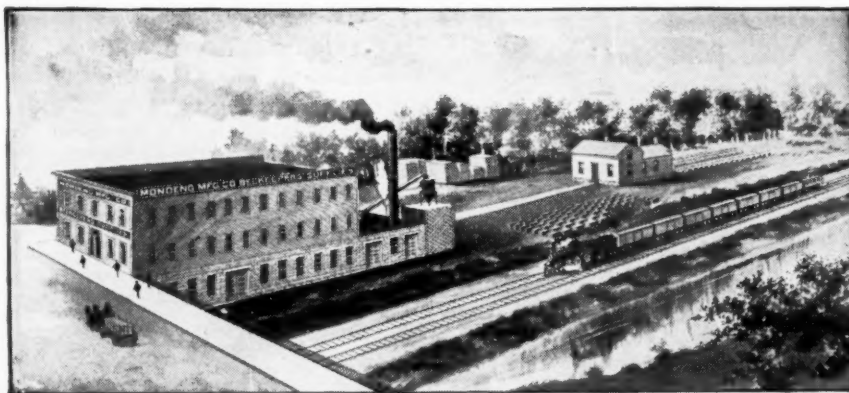
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Manufacturers of

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— SECTIONS — HIVES — AND EVERY-
THING FOR THE BEE-KEEPER**

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THE DEMAND FOR Moore's Strain of Italians

Is greater this season than ever. Why? Because his **FAMOUS LONG-TONGUED RED-CLOVER STOCK** has won a world-wide reputation for honey gathering, hardiness, and gentleness. They were working so thick on a field of red clover at haying-time that the man who cut it was afraid to drive his horses into it to mow it. Their long tongues enable them to secure nectar beyond the reach of short-tongued bees.

Untested Queens, 75c each; six, \$4; dozen, \$7.50. Select Untested, \$1 each; six, \$5; dozen, \$9. Safe arrival and satisfaction guaranteed. Descriptive circular free.

Address, **J. P. MOORE, Rt. 1, Morgan, Pendleton Co., Ky.**
P. S.—I am now filling orders **BY RETURN MAIL.** 29Dt



Wisconsin Basswood Sections And Prompt Shipments

Is what we are making for our customers.

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We carry a full line of **SUPPLIES**. Ask for Catalog.

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\$50 to \$100 per month salary assured our graduates under bond. You don't pay us until you have a position. Largest system of telegraph schools in America. Endorsed by all railway officials. **OPERATORS ALWAYS IN DEMAND.** Ladies also admitted. Write for Catalog.

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with lice on poultry. Schild's Lightning Lice Killing Machine instantly removes them from tinest chick or fat gobbler, 3 sizes. Also Poultry Bits, Lice Murder, Lightning Lice Killing Powder, etc. Catalog free.

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LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., \$1.00 by express.

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D. J. Lambert, Vice-Pres.
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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. **Beeswax Wanted for Cash.**

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General and special agents wanted. Address,

32D8t **A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.**



Tennessee Queens

Owing to the great demand for my **TENNESSEE QUEENS** for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL**. Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones.

Prices until Oct. 1.
Untested 12 for.....\$6.00
" 6 for.....3.25
" 1 for......60

After Oct. 1.
Untested 12 for.....\$7.50
" 6 for.....4.00
" 1 for......75

Tested—
Each.....\$1.50
Breeders—
Each.....3.00

JOHN M. DAVIS, Spring Hill, Tenn.

27A13t

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will hold its next meeting at College Station, with the Farmers' Congress, July 25, 26 and 27, 1905. These annual meetings are usually largely attended and are pleasant and profitable occasions. Visiting bee-keepers from other States are cordially invited to be present with us. **W. H. LAWS, Pres.**
LOUIS H. SCHOLL, Sec.-Treas.

Shipping-Cases PLENTY FOR ALL

Made of Michigan white pine; 24-lb., \$13; 12-lb., \$8; 20-lb. Danzy, \$11 per 100; less than 100 lots, 1c more each; 3-in. glass, 1c each more; No. 1 Sections, \$4; No. 2, \$3.50 per 1000. All kinds of Supplies kept in stock. Send for list. **W. D. SOPER.**

Rural Route 3, **JACKSON, MICH.**
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Capital City Apiary!

Fine Italian Queens

Untested, after June 15, 75c; Tested, \$1.00; Breeders—the very best, \$5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. HOSS.**

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4 Largest Sizes Soot Burning
Never Go Out
And last from 5 to 21 years

BINGHAM
Original
Direct Draft
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Bee Smokers

Tin 4-in. Smoke Engine 3 3/4-inch 8-inch 2 1/2-inch 2-inch Wonder
\$1.50 \$1.00 \$1.00 \$1.00—per mail.
Sent on receipt of price per mail.

Pat'd 1878, '83, '92 & 1904

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. **FRED FODNER.**

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, \$1.50—cash with order. Address,

ADRIAN GETAZ,

44Atf **KNOXVILLE, TENN.**
J. G. Goodner, of this State, writes me that he "prefers to pay \$25 for a Rietsche Press than do without it."—A. G.



BLACK BREASTED RED GAMES
"The KING of Fowlity." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. **H. H. FLICK, MANCHESTER, MD.**

Queens

From best honey-gathering stock, 60c. Tested Queens, \$1.00.

J. F. MICHAEL
Rt. 1, **WINCHESTER, IND.**

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COLUMBIA

ONE-PIECE SECTIONS

JUNE BARGAIN—Stock C.

We have 300,000 No. 2—4 1-4 x 1 7-8 open-top Sections to move QUICK at the following prices :

1000—\$3.00	5000—\$13.75
3000— 8.50	10,000— 25.00

These Sections are extra good grade of No. 2, and we know will please you.
Send your order quick.

COLUMBIA MFG. CO.

ANTIGO. WIS.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
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GUS DITTMER, Augusta, Wis.

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.

By sending in your order now, you will SAVE MONEY, and
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Made with cover all in one piece and in any width up to 13 inches, of the best material obtainable for the purpose, in a factory thoroughly equipped to do the best class of work. On account of our near location to the raw-material district we sell them for less money than you can obtain them elsewhere. Be sure to mention the width desired, and write **TO-DAY**. All we want is your first trial order. We will naturally get your other trade.

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Do You Need Queens ? By Return Mail ?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; \$8 per doz. Tested Queens, \$1 each. Send for circular. **J. W. K. SHAW & CO.**
13Atf LOREAUVILLE, Iberia Par., L.A.
Please mention Bee Journal when writing.

For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, \$1; Untested, 75c; 5 for \$3.25; 10 for \$6; 15 for \$8.25; 25 for \$12.50; 100 for \$45. He breeds Golden, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

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What Adel Bees Do

E. MILTON, Mass., May 27, 1905.
Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905. ROBT. FORBES.

All Tested Queens are \$1 each.
HENRY ALLEY, Wenham, Mass.

IMPORTED CARNIOLAN QUEENS!

A limited number of choice imported Carniolan Queens will be disposed of during July and succeeding months. I shall be in Carniola during July making these shipments which will be distributed from Washington, D. C. Price: Select Imported Queen, \$4.00. Write for rates for 3 or more. Address, **RALPH BENTON,**
925 N St., N.W., WASHINGTON, D. C.

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ITALIAN Bees, Queens and Nuclei



Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... \$.65
One tested queen..... .90
One select tested queen..... 1.10
One breeding queen..... 1.65
One comb nucleus (no queen)..... 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of

Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

J. L. STRONG.

204 East Logan Street, CLARINDA, IOWA.

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When consigning, buying or selling, consult

R. A. BURNETT & CO.,

199 SOUTH WATER ST. CHICAGO, ILL.

CROP 1905

We have a party wanting the first car of new comb honey. It would probably pay those having such goods to write us.

THOS. C. STANLEY & SON,

28Attf MANZANOLA, COLO.

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AUGUST BLOODED STOCK



This well-known, reliable stock-paper will discuss Holstein Cattle, their value as milkers, but-ter makers, cheese makers, beef cattle, etc. Read it. Sub-scribe now. 25c a year. You can afford 25c.

BLOODED STOCK, Box 221, Oxford, Pa.

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Headquarters for Bee-Supplies

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as
GREAT HONEY-GATHERERS.

Golden Italians

Have no superior, and few equals. Untested, 75c; 6 for \$4.00.

Red Clover Queens

Which left all records behind in honey-gathering. Untested, 75c; 6 for \$4.

Carniolans

—They are so highly recommended, being more gentle than all others. Untested, 75c; 6 for \$4.00.

C. H. W. WEBER

CINCINNATI
... OHIO ...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, June 19.—The little that sells consists chiefly of extracted and the market is a small one. Comb ranges from 12@12½c for the best white with off grades 10@3c less. Extracted, white, 5½@7c; amber, 5@6c. Beeswax, ready sale at 30c.

R. A. BURNETT & CO.

ALBANY, N. Y., June 17.—The honey market here is very dull now. It is between seasons. Receipts and demand very light. Very little old crop carried over, and will be in good shape for new crop, which begins in August. Quotations are nominal now. White comb, 12@14c; mixed, 10@12c; dark, 10@11c. Extracted, white, 6@6½c; mixed, 5½@6c; dark, 6@6½c. Beeswax, 28@30c.

H. R. WRIGHT.

KANSAS CITY, June 21.—There is very little comb or extracted honey on the market at present, but what there is being quoted as follows: Fancy white comb, 24 section cases, \$2.25 to \$2.50; No. 1 white and amber, \$1.75 to \$2.00. Extracted, per pound, 4½@6c. Beeswax, 25@28c.

C. C. CLEMONS & CO.

PHILADELPHIA, July 15.—As the season advances, there is very little call for comb honey. In fact, no sales, and we make no quotations. Commission men are accepting any offer they can get for what little stock they have on hand. Extracted honey is in some demand. Possibilities of a big crop are holding prospective buyers back. We quote: Fancy white, 7@7½c; amber, 6@7c; dark, 5½@6c. Beeswax in good demand, 29@30c.

We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, July 10.—We sold to day at our store new crop of fancy comb honey at 13½c per pound. There is still a big stock of last season's honey on the market, that is going begging at any price. Extracted honey is moving quite lively now. We sell amber in barrels at 5½@6½c, according to quality. White clover at 7@8½c. Beeswax, 26c.

THE FRED W. MUTH CO.

NEW YORK, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations. Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon

according to quality. Beeswax somewhat declining; choice average stock selling at 29c.

HILDRETH & SEIGLEN

CINCINNATI, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5½@5 c; in cans, 5½@6c. Beeswax, 28c.

C. H. W. WEBER.

DENVER, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, \$2@2.20; No. 2, \$1.75@2. White extracted, 6½@7½c per pound. Beeswax, 26c.

THE COLO. HONEY-PRODUCERS' ASSN.

SAN FRANCISCO, July 5.—White comb, 1-lb. sections, 11@-cents; amber, 8@10c. Extracted, white, 5½@-cents; light amber, 4@4½c; amber, 3@3½c; dark amber, 2½@-c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

There has been no wholesale movement in honey this week and no new features have developed.

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